

**REMARKS**

Applicants thank the Examiner for the courtesy of the personal interview on April 19, 2006. The substance of the interview is reflected in the amendments and remarks in this response.

In the Office Action dated March 6, 2006, the Examiner rejected each claim under 35 U.S.C. § 102 and/or § 103(a) in view of one or more of U.S. Patent No. 5,171,383 to Sagaye et al. ("Sagaye"), U.S. Patent No. 5,833,631 to Nguyen ("Nguyen"); U.S. Patent No. 5,354,257 to Roubin et al. ("Roubin"); U.S. Patent No. 5,154,705 to Fleischhacker et al. ("Fleischhacker"); U.S. Patent No. 4,984,581 to Stice ("Stice"), U.S. Patent No. 6,139,540 to Rost et al. ("Rost"), U.S. Patent No. 5,997,517 to Whitbourne ("Whitbourne"), U.S. Patent No. 5,174,302 to Palmer ("Palmer"); U.S. Patent No. 5,885,227 to Finlayson ("Finlayson"); U.S. Patent No. 5,947,940 to Beisel ("Beisel"), and U.S. Patent No. 4,932,419 to de Toledo ("de Toledo").

With this amendment, Applicants have amended claims 22, 28, 29, 32, 33, 38, 57, 60-62, 70, and 84 to more clearly define the claimed invention, have cancelled claims 90-95, and have added new claim 96. By this Amendment, claims 22, 25, 28-30, 32-39, 57, 58, 60-89, and 96 are pending in this application, with claims 22, 28, 29, 32, 33, 38, 57, 60-62, 70, and 84 being independent. Support for these amendments is provided at least in drawing Fig. 2 and page 10, lines 5-15 of the specification. No new matter had been added. The amendments presented herein are consistent with those proposed during the personal interview of April 19, 2006.

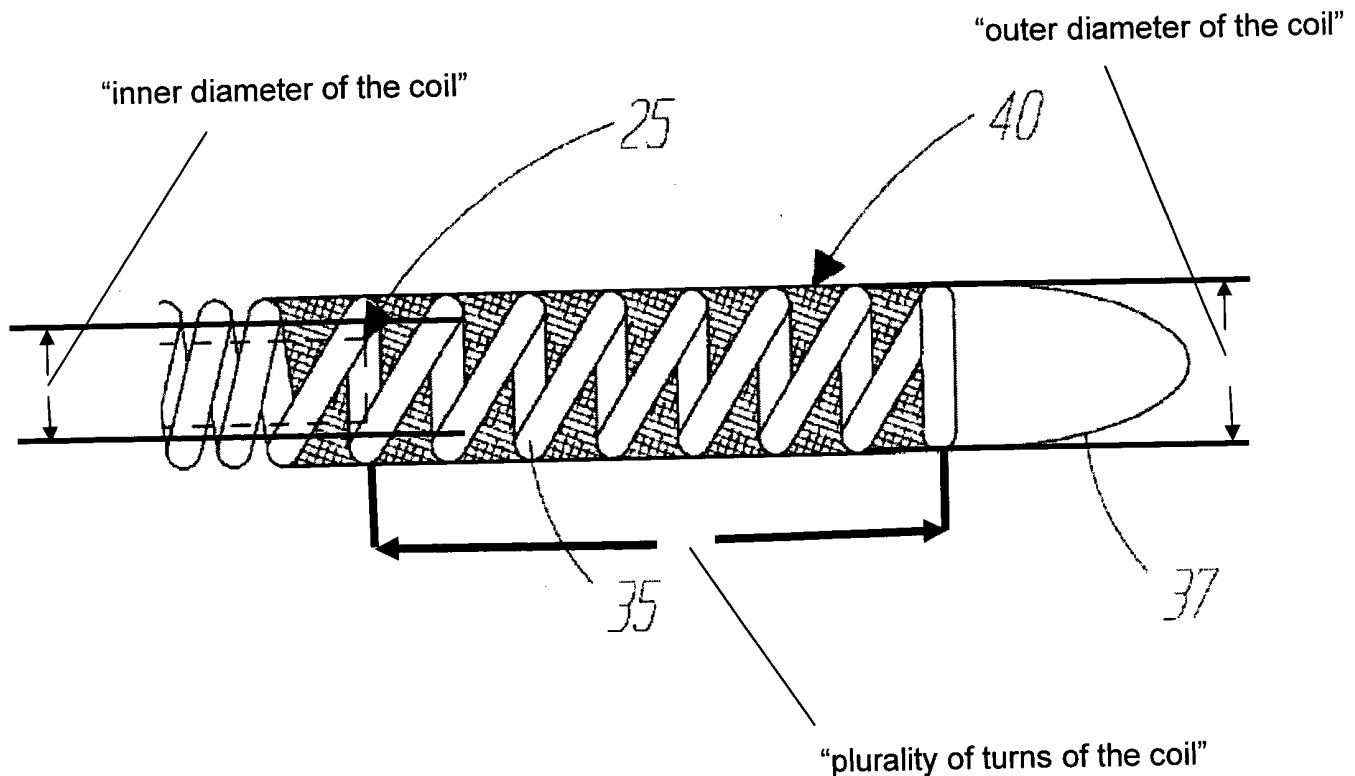
**Claims 22, 28, 29, 32, 33, and 38 Are Patentable in View of the Prior Art**

In the Office Action, the Examiner rejected each of independent claims 22, 28, 29, 32, 33, and 38, asserting that each claim is either anticipated or obvious in view of the prior art. In rejecting the independent claims, the Examiner relied upon the references of Sagaye, Nguyen, Roubin, and Fleischhacker, either alone as a basis for anticipation, or as the primary reference in an obviousness rejection. As will be described in more detail below, these reference do not support a prima facie case of either anticipation or obviousness.

As amended, each of independent claims 22, 28, 29, 32, 33 and 38 recites, *inter alia*, a guide wire having an elongate core and a continuous coil. The coil has an inner diameter and an outer diameter and extends beyond the distal end of the core by a plurality of turns of the coil. A polymeric tip extends from a distal portion of the coil. The tip connects to the core by a polymeric material provided within spaces between adjacent turns of the coil such that the polymeric material encloses at least an area inside the inner diameter of the coil and up to the outer diameter of the coil.

The amended claim features are supported at least by original FIG. 2. See, e.g., *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563 19 USPQ2d 1111, 1115 (Fed. Cir. 1991) (“drawings alone may be sufficient to provide the written description of the invention required by §112, first paragraph”) and *Koito Mfg. Co., Ltd. v. Turn-Key-Tech, LLC*, 381 F.3d 1142, 1154-55, 72 USPQ2d 1190, 1199 (Fed. Cir. 2004) (“the written description requirement can be satisfied by words, structures, *figures, diagrams, formulas, etc.*”) (emphasis in original) (holding that claims met the written description requirement where a flow channel was claimed as being “significantly thicker and wider”

than an adjacent layer because figure 1 of the patent clearly showed this feature even though the specification did not describe this feature with words). An annotated version of FIG. 2 is provided below in order to point out certain features of claims 22, 28, 29, 32, 33 and 38.



ANNOTATED FIG. 2

For the reasons that follow, Applicants submit that the cited references fail to teach or suggest, either alone or in combination, at least the feature of a polymeric tip that connects to the core by a polymeric material provided within spaces between adjacent turns of the coil such that the polymeric material encloses at least an area

inside the inner diameter of the coil and up to the outer diameter of the coil, as recited in claims 22, 28, 29, 32, 33, and 38.

### **The Sagaye Reference**

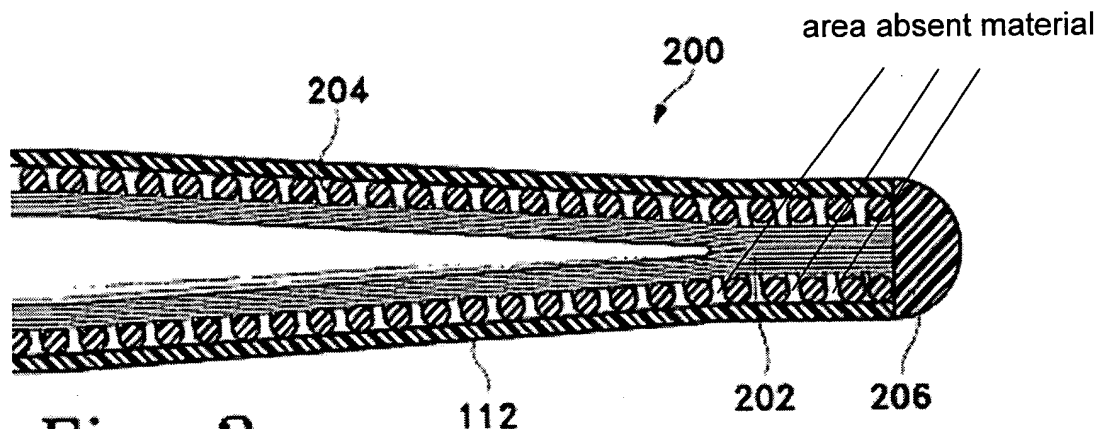
In FIG. 3 (relied upon by the Examiner in the March 6, 2006, Office Action, page 2) and in the disclosure of column 4, lines 61-63 of Sagaye, the coil spring 3 is expressly disclosed as "mounted on an outer surface of resin layer 2." Therefore, Sagaye only teaches a coil mounted over a resin surface. There is no teaching or suggestion of a polymeric material that encloses at least an area inside the inner diameter of the coil and up to the outer diameter of the coil, as claimed.

Therefore, for at least these reasons, Sagaye fails to teach or suggest the subject matter recited in claims 22, 28, 29, 32, 33, and 38, and all of the claims dependent thereon.

### **The Nguyen Reference**

In FIG. 2 (relied upon by the Examiner in the March 6, 2006, Office Action, page 3) of Nguyen, a fiber bundle 202 extends beneath the coil 204, while a polymeric covering 112 is provided on the outside of the coil 204. As seen in FIG. 2, however, no polymeric material is provided within spaces between adjacent turns of the coil such that the polymeric material encloses at least an area inside the inner diameter of the coil and up to the outer diameter of the coil. In fact, FIG. 2, expressly discloses this area as being absent any material at all and nowhere does the disclosure of Nguyen teach or suggest otherwise.

In the response to arguments section of the March 6, 2006 Office Action, the Examiner argued that if the covering 112 of Nguyen was shrunk with heat, a portion would inherently protrude into spaces between adjacent turns of the coil. (March 6, 2006, Office Action, Page 14.) Nguyen, however, does not provide any teaching or suggestion of an arrangement where a polymeric material encloses an area inside the inner diameter of the coil and up to the outer diameter of the coil, as claimed. For example, as represented in the annotated version of FIG. 2 of Nguyen below, the area between adjacent turns of coil 204 is absent any material, whether polymeric or otherwise. Accordingly, Nguyen fails to disclose at least a polymeric material that extends up to outer diameter of coil 204.



**Fig. 2**

ANNOTATED FIG. 2

Therefore, for at least the reasons presented above, Nguyen fails to teach or suggest fails to teach or suggest the subject matter recited in claims 22, 28, 29, 32, 33, and 38, and all of the claims dependent thereon.

### **The Roubin Reference**

In FIG. 2 (relied upon by the Examiner in the March 6, 2006, Office Action, page 4) of Roubin, a weld 24 connects a mandrel wire 21 to a coil 16. The Examiner acknowledges that Roubin fails to teach a polymeric material. (March 6, 2006, Office Action, page 4.) Even assuming for the sake of argument that it would have been obvious to substitute a polymeric material for the weld 24, Roubin would still fail to teach or suggest a polymeric material as claimed.

As seen in FIG. 2, no material is provided within spaces between adjacent turns of the coil such that the material (whether a polymer or a weld material) encloses at least an area inside the inner diameter of the coil and up to the outer diameter of the coil. In fact, FIG. 2 expressly discloses the weld 24 is only provided within the coil 16 and does not extend to the outer diameter of the coil 16.

Therefore, for at least the reasons presented above, Roubin fails to teach or suggest the subject matter recited in claims 22, 28, 29, 32, 33, and 38, and all of the claims dependent thereon.

### **The Fleischhacker Reference**

In FIG. 7 (relied upon by the Examiner in the March 6, 2006, Office Action, pages 13-14) of Fleischhacker, a weld 51 or 52 (See Fleischhacker at column 8, lines 24-25) connects a core wire 53 to an inner coil M. The Examiner acknowledges that Fleischhacker fails to teach a polymeric material. (March 6, 2006, Office Action, pages 13-14.) Even assuming for the sake of argument that it would have been obvious to substitute a polymeric material for the disclosed weld, Fleischhacker would still fail to teach or suggest a polymeric material as claimed.

As seen in FIG. 7, no material is provided within spaces between adjacent turns of the coils M or N such that the material (whether a polymer or a weld material) encloses at least an area inside the inner diameter of the coil and up to the outer diameter of the coil. In fact, FIG. 7, expressly discloses the weld is only provided within the inner coil M and does not extend to the outer diameter of either coil M or coil N.

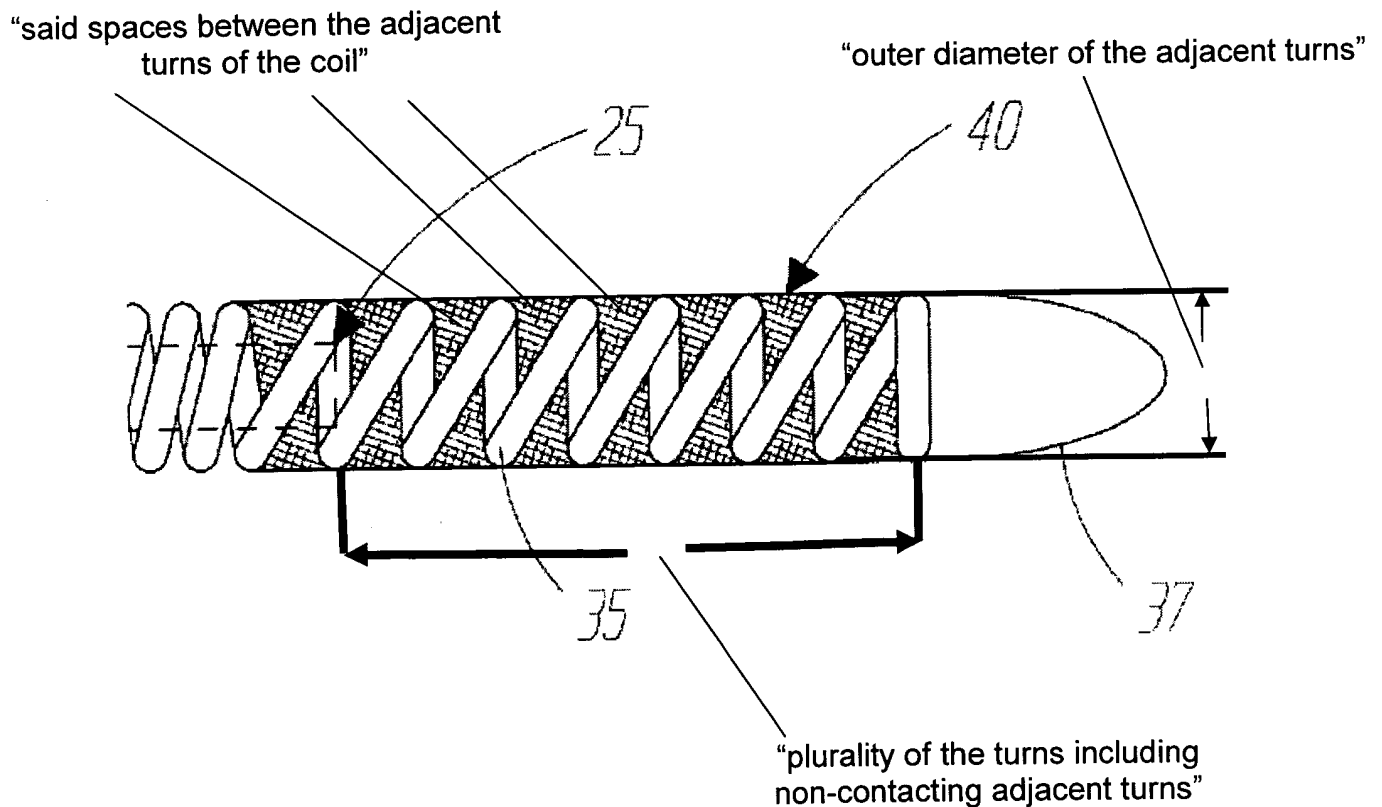
Therefore, for at least the reasons presented above, Fleischhacker fails to teach or suggest the subject matter recited in claims 22, 28, 29, 32, 33, and 38, and all of the claims dependent thereon.

**Claims 57, 60-62, 70, and 84 Are Patentable in View of the Prior Art**

In the Office Action, the Examiner rejected each of independent claims 57, 60-62, 70, and 84, asserting that each claim is either anticipated or obvious in view of the prior art. In rejecting the independent claims, the Examiner relied upon the references of Sagaye, Nguyen, Roubin, and Fleischhacker, either alone as a basis for anticipation, or as the primary reference in an obviousness rejection. As will be described in more detail below, these reference do not support a prima facie case of either anticipation or obviousness.

As amended, each of independent claims 57, 60-62, 70, and 84 recites, *inter alia*, a guide wire having an elongate core and a continuous coil that extends beyond the distal end of the core by a plurality of turns of the coil. The plurality of the turns include non-contacting adjacent turns defining spaces extending to an outer diameter of the adjacent turns. A polymeric tip extends from a distal portion of the coil. The tip connects to the core by a polymeric material that entirely fills said spaces between the adjacent turns of the coil.

The amended claim features are supported at least by original FIG. 2. See, e.g., *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563 19 USPQ2d 1111, 1115 (Fed. Cir. 1991) (“drawings alone may be sufficient to provide the written description of the invention required by §112, first paragraph”) and *Koito Mfg. Co., Ltd. v. Turn-Key-Tech, LLC*, 381 F.3d 1142, 1154-55, 72 USPQ2d 1190, 1199 (Fed. Cir. 2004) (“the written description requirement can be satisfied by words, structures, *figures, diagrams*, formulas, etc.”) (emphasis in original) (holding that claims met the written description requirement where a flow channel was claimed as being “significantly thicker and wider” than an adjacent layer because figure 1 of the patent clearly showed this feature even though the specification did not describe this feature with words). An annotated version of FIG. 2 is provided below in order to point out certain features of claims 57, 60-62, 70, and 84.



ANNOTATED FIG. 2



For the reasons that follow, Applicants submit that the cited references fail to teach or suggest, either alone or in combination, at least the feature of a plurality of the turns including non-contacting adjacent turns defining spaces extending to an outer diameter of the adjacent turns, and a polymeric tip that connects to the core by a polymeric material that entirely fills said spaces between the adjacent turns of the coil, as recited in claims 57, 60-62, 70, and 84.

### **The Sagaye Reference**

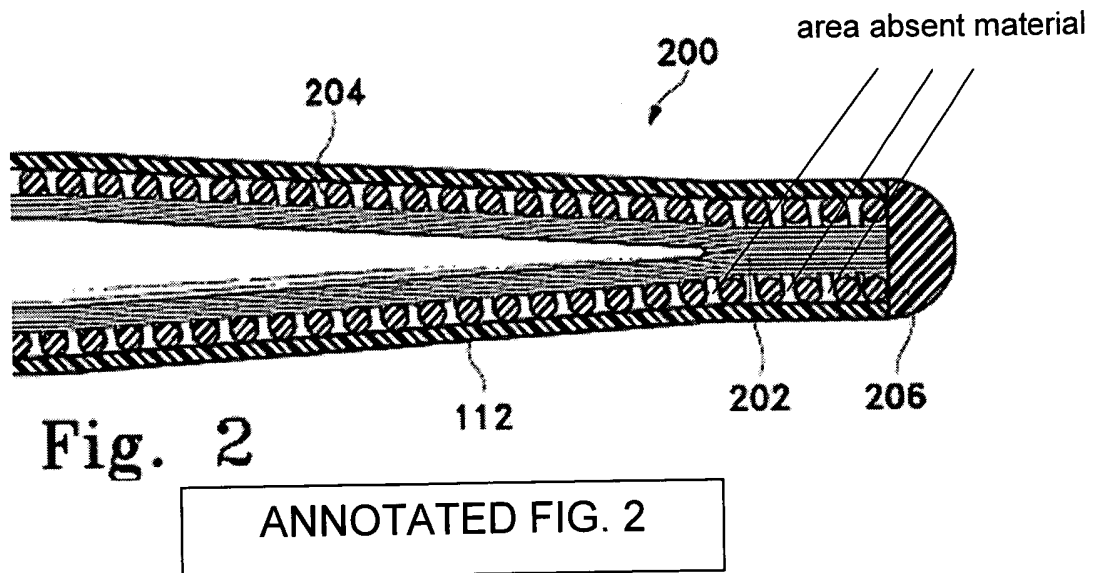
In FIG. 3 (relied upon by the Examiner in the March 6, 2006, Office Action, page 2) and in the disclosure of column 4, lines 61-63 of Sagaye, the coil spring 3 is expressly disclosed as "mounted on an outer surface of resin layer 2." In addition, every coil disclosed in Sagaye is provided with adjacent turns that are in contact with each other with no spaces defined therebetween. Sagaye only teaches a coil having contacting adjacent turns mounted over a resin surface.

Therefore, for at least the reasons presented above, Sagaye fails to teach or suggest the subject matter recited in claims 57, 60-62, 70, and 84, and all of the claims dependent thereon.

### **The Nguyen Reference**

In FIG. 2 (relied upon by the Examiner in the March 6, 2006, Office Action, page 3) of Nguyen, a fiber bundle 202 extends beneath the coil 204, while a polymeric covering 112 is provided on the outside of the coil 204. As seen in FIG. 2, however, no polymeric material entirely fills spaces extending to an outer diameter of adjacent non-contacting turns of the coil. In fact, FIG. 2, expressly discloses a portion of this area as being absent any material at all and nowhere does the disclosure of Nguyen teach or

suggest otherwise. For example, as represented in the annotated version of FIG. 2 of Nguyen below, the area between adjacent turns of coil 204 is absent any material, whether polymeric or otherwise.



Therefore, for at least the reasons presented above, Nguyen fails to teach or suggest the subject matter recited in claims 57, 60-62, 70, and 84, and all of the claims dependent thereon.

#### **The Roubin Reference**

In FIG. 2 (relied upon by the Examiner in the March 6, 2006, Office Action, page 4) of Roubin, a weld 24 connects a mandrel wire 21 to a coil 16. The Examiner acknowledges that Roubin fails to teach a polymeric material. (March 6, 2006, Office Action, page 4.) Even assuming for the sake of argument that it would have been obvious to substitute a polymeric material for the weld 24, Roubin would still fail to teach or suggest a polymeric material as claimed.

As seen in FIG. 2 (and every other figure of Roubin), every portion of a coil provided distal of a core wire is provided with adjacent turns that are in contact with each other with no spaces defined therebetween. Roubin only teaches a coil having a distal portion with contacting adjacent turns having a weld material therein.

Therefore, for at least the reasons presented above, Roubin fails to teach or suggest the subject matter recited in claims 57, 60-62, 70, and 84, and all of the claims dependent thereon.

### **The Fleischhacker Reference**

In FIG. 7 (relied upon by the Examiner in the March 6, 2006, Office Action, pages 13-14) of Fleischhacker, a weld 51 or 52 (see Fleischhacker at column 8, lines 24-25) connects a core wire 53 to an inner coil M. The Examiner acknowledges that Fleischhacker fails to teach a polymeric material. (March 6, 2006, Office Action, pages 13-14.) Even assuming for the sake of argument that it would have been obvious to substitute a polymeric material for the disclosed weld, Fleischhacker would still fail to teach or suggest a polymeric material as claimed.

As seen in FIG. 7 (and every other figure of Fleischhacker), every portion of a coil provided distal of a core wire is provided with adjacent turns that are in contact with each other with no spaces defined therebetween. Fleischhacker only teaches a coil having a distal portion with contacting adjacent turns having a weld material therein.

Therefore, for at least the reasons presented above, Fleischhacker fails to teach or suggest the subject matter recited in claims 57, 60-62, 70, and 84, and all of the claims dependent thereon.

**Claim Rejections Under 35 U.S.C. § 103(a)**

In the March 6, 2006, Office Action, the Examiner also rejected claims under 35 U.S.C. § 103(a) as unpatentable over one of the above primary references and further in view of one of the secondary references of Stice, Rost, Whitbourne, Palmer, Finlayson, Beisel, and de Toledo. These secondary references do not compensate for the deficiencies in the teachings of Sagaye, Nguyen, Roubin, and Fleischhacker discussed above. Accordingly, Applicants respectfully request that the Section 103(a) rejections be withdrawn.

**Conclusion**

Applicants respectfully requests that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 22, 25, 28-30, 32-39, 57, 58, 60-89, and 96 in condition for allowance. Applicants submit that the proposed amendments of claims 22, 28, 29, 32, 33, 38, 57, 60-62, 70, and 84, and the addition of claim 96 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Furthermore, Applicants respectfully point out that the final action by the Examiner presented some new arguments as to the application of the art against Applicant's invention. It is respectfully submitted that the entering of the Amendment would allow the Applicants to reply to the final rejections and place the application in condition for allowance.

Finally, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

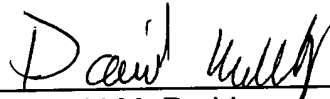
In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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GARRETT & DUNNER, L.L.P.

Dated: May 4, 2006

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